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Textual priming of automaticity in handwriting: A 2 × 2 × 2 factorial design

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abstract

Textual priming of automaticity in handwriting: A 2 × 2 × 2 factorial design. The present study examined the effects of textual priming on the automaticity of handwriting. Participants were asked to write a cursive letter 't' after seeing a cursive letter 't' (priming) or a different cursive letter (control). The results showed that priming with the same letter led to faster and more accurate handwriting compared to priming with a different letter. This effect was mediated by efferent copy, which is the internal representation of the motor plan for the letter. The findings suggest that textual priming can be used to improve handwriting fluency and automaticity.

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E... U... t... t...
t... S... F... (H... L... &...
2009)... T... (!)... B... F... & G... T...
1999; T... (2003). T... The Sneaky Chef: Simple Strategies for Hiding Healthy Foods in Kids' Favorite Meals
(... 2007), The Sneaky Chef to the Rescue: 101 All-New Recipes and "Sneaky Tricks for Creating
Healthy Meals Kids Love (... 2009), Deceptively Delicious: Simple Secrets to Get Your Kids Eating
Good Food (§2... 2008). S... M... 40,000...
T... t...

t t 3- 4- 2 - 2,2t 2 tt 2,2t t t,2 2t 2
t,2, 2,2 t 2 (N 2, 2012). T 2 t 2,2t 2,2t 2, 2
2,2 t 2t who, 2,2 2 t 2,2 t 2,2t H 2,2, t 2
2,2, 2,2 2t 2t why, 2,2 2,2 tt tt 2,2 2 t -
t 2,2 tt t tt 2,2 2.T t t 2, 2 t t 2, 2t -
2 t 2 2,2 2,2t 2,2,2 2,2 t 2, 2 t 2, 2
2,2 2,2 2,2 t . F 2,2 2,2 t 2,2 t 2,2 t t
2t 2,2 2,2 t t,2t (R 2, 1990; S,2, 1995). T ,

2,2 2,2 2,2 (2,t) 2,2 2,2 2,2 t 2,2t t 2
2,2 2,2 \$ 2 1 2 2 2 2t 2,2 2,2 t 2,2 t 2
t , \$ 3 , 2 2t 2,2 t 2,2 2,2 2,2/

2 t 2tt t 2 .T , 2- 2,2 2 t2 t 2 2t , t
t t t 2 ,, t2, /t . \$ t \ t i 2 2t 2 t2,t 2,2 t \ 2
t t / t ,4-2 - / , / 3-2 - 2 \ 2 t 2, 2,2,2 .,2 t
t2,2 , t t t 2 \ t 2 t ,, ,t

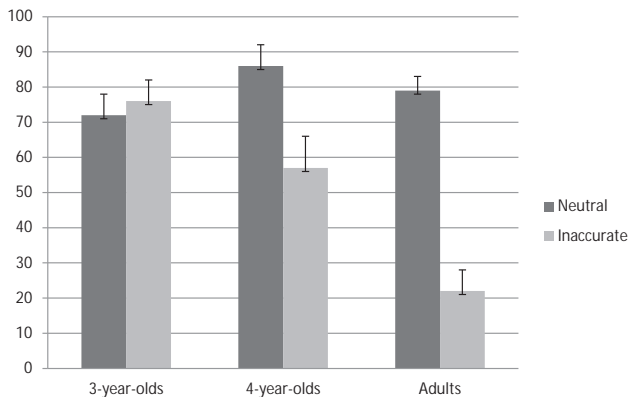
36 (18; $M = 19.64$, $SD = 18.04$;
 34.17). $H(2, 102) = 1.18$, $p = .31$.
 $H(2, 102) = 1.18$, $p = .31$.

Materials and procedure

The study was conducted in a laboratory setting. Participants were seated at a table and viewed a video screen. The screen displayed a sequence of four faces: a neutral face, a face with a slight smile, a face with a slight frown, and a face with a wide smile. The faces were presented in a sequence that was either neutral or inaccurate. The neutral sequence consisted of the neutral face, followed by the slight smile, the slight frown, and the wide smile. The inaccurate sequence consisted of the neutral face, followed by the wide smile, the slight frown, and the slight smile. The sequence was presented for 2 seconds. The faces were presented in a sequence that was either neutral or inaccurate. The neutral sequence consisted of the neutral face, followed by the slight smile, the slight frown, and the wide smile. The inaccurate sequence consisted of the neutral face, followed by the wide smile, the slight frown, and the slight smile. The sequence was presented for 2 seconds. The faces were presented in a sequence that was either neutral or inaccurate. The neutral sequence consisted of the neutral face, followed by the slight smile, the slight frown, and the wide smile. The inaccurate sequence consisted of the neutral face, followed by the wide smile, the slight frown, and the slight smile. The sequence was presented for 2 seconds.

Results and discussion

A 3×2 (Age Group \times Accuracy) ANOVA revealed a significant main effect of Age Group, $F(2, 102) = 8.17$, $p = .001$, $\eta^2 = .14$, and a significant main effect of Accuracy, $F(1, 102) = 28.44$, $p < .001$, $\eta^2 = .22$. The interaction between Age Group and Accuracy was also significant, $F(2, 102) = 11.48$, $p < .001$, $\eta^2 = .18$. Follow-up analyses revealed that 3-year-olds performed at chance level (50%) for both neutral and inaccurate sequences. 4-year-olds performed significantly better than chance for the neutral sequence (85%), but not for the inaccurate sequence (57%). Adults performed significantly better than chance for both neutral (79%) and inaccurate (22%) sequences.



$d' = 2.56$. $T(34) = 7.70$, $p < .001$, $t(34) = 2.83$, $p = .008$, $d' = 0.94$. $I(34) = 0.43$, $p = .66$.
 ANOVA
 $F(2, 51) = 1.65$, $p = .20$. $H(2, 51) = 14.83$, $p < .001$, $S(2, 51) = 1.07$, $p = .003$, $d' = 1.07$. $A(2, 51) = 2.11$, $p < .001$, $d' = 2.11$.
 $(17) = 6.75$, $p < .001$, $d = 1.59$. $T(17) = 6.32$, $p < .001$, $d' = 1.49$, $t(17) = 3.50$, $p = .003$, $d' = .82$.
 $t(17) = 4.33$, $p < .001$, $d' = 1.02$. $A(17) = 0.74$, $p = .46$. $H(17) = -4.60$, $p < .001$, $d' = 1.09$.
 $N(2, 192) = 8.34$, $p < .001$, $\eta^2 = .08$, $F(1, 192) = 50.99$, $p < .001$, $\eta^2 = .21$. $T(2, 192) = 15.89$, $p < .001$, $\eta^2 = .08$.

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